In Re Application Of: Unger and McCreery Application No.: 10/802,919 Filed: March 18, 2004 Page 2

IN THE CLAIMS

Please amend claims 105-108 and 112, as shown below. The following listing of claims replaces all prior listings.

1-104. (Canceled).

- 105. (Currently amended) A method for delivering a protein into a cell in vivo, comprising:
- (a) forming a protein-halide composition by combining the protein to be delivered and an organic halide; and
- (b) administering the protein-halide composition to the cell a composition, which comprises the protein to be delivered and an

wherein the organic halide is selected from a the group consisting of 1-bromononafluorobutane, perfluorocctyliodide, perfluoroccytlbromide, 1-chloro-1-fluoro-1-bromomethane, 1,1,1-trichloro-2,2,2-trifluoroethane, 1,2-dichloro-2,2-difluoroethane, 1,1-dichloro-1,2-difluoroethane, 1,2-dichloro-1,1,3-trifluoropropane, 1-bromoperfluorobutane, 2-iodo-1,1,1-trifluoroethane, 5-bromovaleryl chloride, 1,3-dichlorotetrafluoroacetone, 1-bromo-1,1,2,3,3,3-hexafluoropropane, 2-chloro-1,1,1,4,4,4-hexafluoro-2-blutene, 2-chloropentafluoro-1,3-butadiene, iodotrifluoroethylene, 1,1,2-trifluoro-2-chloroethane, 1,2-difluorochloroethane, 1,1-difluoro-2-chloroethane, 1,1-dichlorofluoroethane, heptafluoro-2-iodopropane, bromotrifluoroethane, chlorotrifluoromethane, diehlorodifluoromethane, dibromofluoromethane, chloropentafluoroethane, bromochlorodifluoromethane, dichloro-1,1,2,2-tetrafluoroethane, 1,1,1,3,3-pentafluoropentane, perfluorotributylamine, perfluorotripropylamine, 2,2,2-trifluoroethylacrylate, 3-(trifluoromethoxy)-acetophenone, 1,1,2,2,3,3,4,4-octafluorobutane, 1,1,1,3,3-pentafluorobutane, 1-fluorobutane, 1-fluorobutane, 1,1,1,2,2,3,3,4,4-octafluorobutane, 1,1,1,3,3-pentafluorobutane, tetradecaperfluoroheptane.

PATENT Attorney Docket No. IMARX1380-3

In Re Application Of: Unger and McCreery Application No.: 10/802,919 Filed: March 18, 2004

Page 3

dodecaperfluorocyclohexane, perfluoromethane, perfluoroethane, perfluoropropane, perfluorobutane, perfluoropentane, perfluorohexane, perfluorobetane, perfluorocetane, perfluoronane, perfluorodecane, perfluorodecane, perfluorocyclohexane, perfluorocyclohexane, perfluorocyclohexane, perfluoropropylene, perfluorocyclohutane, perfluoro-2-butyne, perfluoro-2-butyne, perfluoro-2-butene, perfluorobuta-1,3-diene, perfluorobutylethyl ether, bis(perfluoroisopropyl) ether, bis(perfluoropropyl) ether, perfluoromethyl tetrahydrofuran, perfluoro t-butyl methyl ether, perfluoro isobutyl methyl ether; perfluoro n-butyl methyl ether, perfluoro or-butyl methyl ether, perfluoro or-propyl ethyl ether, perfluoro or-propyl ethyl ether, perfluoro cyclobutyl methyl ether, perfluoro diethyl ether, perfluoro cyclopropyl methyl ether, perfluoro or-propyl methyl ether, perfluoro diethyl ether, perfluoro cyclopropyl methyl ether, perfluoro methyl ether, perfluoro dimethyl ether,

wherein the path of administering of the protein-halide composition to the cell is selected from a group consisting of the administering through a cell membrane, cell wall, and nuclear membrane, or any combination thereof,

to achieve the intracellular delivery of the protein thereby.

- 106. (Currently amended) The method of claim 105, wherein the organic halide is selected from a <u>the</u> group consisting of 1-bromo-nonafluorobutane, 1,1,1,3,3-pentafluoropentane, perfluorohexane, perfluorocyclohexane, 1-bromo-1,1,2,3,3,3-hexafluoropropane, heptafluoro-2-iodopropane, 1,1,2,2,3,3,4,4-octafluorobutane, 1-fluorobutane, tetradecaperfluorheptane, and dodecaperfluorocyclohexane.
- 107. (Currently amended) The method of claim 105, wherein the organic halide is selected from a <u>the</u> group consisting of perfluorohexane and perfluorocyclohexane.
- 108. (Currently amended) The method of claim 105, wherein the protein is selected from a <u>the</u> group consisting of albumin, collagen, polyarginine, polylysine, polyhistidine, γ-globulin, and β-globulin.

Attorney Docket No. IMARX1380-3

Filed: March 18, 2004

Page 4

109. (Previously presented) The method of claim 105, wherein the protein is a cationic protein.

- 110. (Previously presented) The method of claim 109, wherein the cationic protein is selected from the group consisting of polylysine and polyethyleneimine.
- 111. (Withdrawn) The method of claim 105, further comprising applying ultrasound to the cell.
- 112. (Withdrawn-Currently amended)

 The method of claim 111, wherein the ultrasound is applied at a frequency between between about 40 kHz and 25 MHz, and an energy level between about 500 mW/cm² and 10 W/cm².
- 113. (Withdrawn) The method of claim 111, wherein the ultrasound is applied at a frequency between about 200 kHz and 500 kHz, and the energy level is between about 200 mW/cm² and 500 W/cm².
- 114. (Withdrawn) The method of claim 111, wherein the ultrasound is applied at a frequency between about 1 MHz and 20 MHz, and the energy level is between about 100 W/cm² and 200 W/cm².
- 115. (Withdrawn) The method of claim 114, wherein the ultrasound is applied at a duty cycle between about 1% and 100% of the treatment time.
- 116. (Withdrawn) The method of claim 111, wherein the protein and the ultrasound are administered and applied simultaneously.